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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/805,786

03/22/2004

Louis J. Spadaccini

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26096 7590 08/03/2007  
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EXAMINER

CASAREGOLA, LOUIS J

ART UNIT

PAPER NUMBER

3746

MAIL DATE

DELIVERY MODE

08/03/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

Application No.

10/805,786

Applicant(s)

SPADACCINI ET AL.

Examiner

Louis J. Casaregola

Art Unit

3746

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 7/20/07.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) 10,19,22-28 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9,11-16,18,20-21 is/are rejected.
- 7) ☒ Claim(s) 17 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_.

### ***Election***

In their latest response, applicants have elected the invention of Group I (apparatus) and the species comprising the features of Figures 1 and 3 along with the metal catalyst in claims 9 and 18. Applicants have also listed claims 1-9, 11-18, 20 and 21 as readable on the elected invention. An action on the merits of these claims is presented below, and non-elected claims 10, 19 and 22-28 are withdrawn from further consideration.

### ***Objections To Claims***

Claims 2-5 and 13-16 are objected to under 37 CFR 1.75(a) for the following reasons:

Claims 2 and 13, along with related dependent claims 3-5 and 14-16, make reference to "said fuel passages"; see line 2 in either of claims 2 or 13. The cited expression lacks antecedent basis.

### ***Claim Rejections - 35 USC 102***

Claims 1-9 and 11 are rejected under 35 USC 102(b) as being anticipated by

Spadaccini et al '815.

All features of the broadly claimed fuel system are present in prior art systems of the type disclosed by Spadaccini. Attention is called to the fuel system shown in either of Spadaccini's Figures 3 or 9; note that fuel is delivered to deoxygenator 10 (Fig. 3) or 110 (Fig. 9), both of which are membrane type PTFE units as specified in claims 2 and 3. Note also that the claimed energy conversion device corresponds to whatever device consumes Spadaccini's fuel. Such a device is shown, for example, as element 104 (Fig. 9), and it may constitute a propulsion system such as a gas turbine (col. 6, line 54). With regard to claims 4 and 5, attention is further called to membrane support substrate 26 (Fig. 4), and to partial pressure creating device 58 (Fig. 3).

The claims additionally describe the deoxygenator with the expression, "for removing a portion of dissolved gases from fuel flowing to a catalyst" (claim 1, lines 3-4). This language along with further related references to the catalyst in claims 6-9 and 11 are mere statements of intended use since no catalyst or catalytic device is actually recited in the claims. Moreover, if the fuel system structure broadly recited in the present claims is presumed capable of supplying fuel to a catalyst, then the corresponding prior art structure can be presumed equally capable.

***Claim Rejections - 35 USC 103***

Claims 12-16, 18, 20 and 21 are rejected under 35 USC 103(a) as being unpatentable over Spadaccini et al as discussed above and further in view of Pfefferle.

Pfefferle is cited as disclosing a gas turbine engine comprising a combustor 30 including a catalyst 31 (Fig. 2). As indicated above, Spadaccini specifically states that his fuel system may be used for a gas turbine engine. The combination of Spadaccini's fuel system with various types of gas turbine engines, including those with catalytic combustors like Pfefferle's, would have thus been obvious. Such a combination, moreover, would provide fuel from a deoxygenator to a catalyst as specified in the present claims. With regard to claims 18, 20 and 21, it is additionally pointed out that Pfefferle's catalyst may be metal (col. 7, lines 9-10), the catalyst is mounted in a combustor so it is adjacent a heat producing area of the engine, and it is heated by the fuel flowing through it since it initiates combustion.

***Allowable Subject Matter***

Claim 17 contains allowable subject matter but is objected to as depending from a rejected parent claim. If rewritten in independent form, claim 17 will be allowed.

Art Unit: 3746



L. J. Casaregola

571-272-4826 (M-F; 7:30-4:00)

571-273-8300 FAX

July 26, 2007

If repeated attempts to reach the examiner by telephone are unsuccessful, the art unit supervisor, Anthony Stashick, can be reached at 571-272-4561.

Information regarding the status of this application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR, and status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).